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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,950	12/22/2005	Mitsuru Naito	OGW-0411	2962

7590 11/15/2007

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EXAMINER	
FISCHER, JUSTIN R	

ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
11/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/561,950	NAITO ET AL.	
	Examiner	Art Unit	
	Justin R. Fischer	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *122205*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bridgestone (JP 47-26481). As best depicted in Figures 1, 3a, and 3b, Bridgestone is directed to a pneumatic tire construction comprising a sealant layer 1 and a pair of rubber cover layers 2, wherein said rubber cover layers can have a thickness of 0.5 millimeters or less (Page 379- 1st Column; as obtained from USPTO translator). While the reference fails to expressly disclose the hardness of the rubber cover layer, the rubber cover layer of Bridgestone would necessarily have a hardness in accordance to the claim invention (JIS A of 70). In particular, the figures and disclosure of Bridgestone suggest that the protective layer has a hardness that prevents the sealant from flowing out and ruining the appearance of the tire. This is analogous to the applicant's inventive tire constructions, as compared to the comparative examples. In view of applicant's disclosure, the only way for the tire construction of Bridgestone to function properly (limited flow of sealant without attachment to nail) would be if the rubber cover layer satisfied the claimed hardness values.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobson (GB 2,146,959) and further in view of Ochiai (US 5,029,627) and Harrington (US 3,964,532). Dobson substantially teaches the pneumatic tire construction of the claimed invention, including a sealant layer 6 and a rubber cover strip/layer 7. The reference further teaches that said rubber cover strip has a preferably thickness between 0.3 mm and 2.5 mm, which entirely encompasses the claimed range between 0.5 mm and 1.8 mm (hardness values of 50 and 70) (Page 2, Lines 15-20). As to the hardness, one of ordinary skill in the art at the time of the invention would have expected said strip to have a hardness between 50 and 70 since (a) the reference discloses the strip as having a "low modulus" (associated with lower hardness rubber compositions) and (b) Ochiai (Column 3, Lines 55-65) and Harrington (Column 2, Lines 35-40) suggest that similar innerliner rubber layers have a hardness in accordance to the claimed invention. It is further noted that applicant's data is not seen to constitute a conclusive showing of unexpected results- it is suggested that applicant compare specific examples in which the hardness is satisfied and the thickness is not satisfied and examples in which the thickness is satisfied and the hardness is not satisfied (it is unclear exactly what constructions are depicted in figures 3a and 3b). Thus, absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of

the invention would have found it obvious to form the rubber cover strip of Dobson with a hardness between 50 and 70 and a thickness in accordance to the claimed equation.

Regarding claim 3, the rubber cover strip of Dobson has an ultimate elongation of at least 500%, which fully encompasses the claimed range of at least 700%, there being no conclusive showing of unexpected results to establish a criticality for the claimed range.

5. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (EP 1034948) and further in view of Ochiai and Harrington. Ishikawa substantially teaches the claimed tire construction, including a sealant layer 15 and a rubber cover layer or packing sheet 5. The reference further teaches that the packing sheet has a thickness between 0.5 and 2.0 mm, which is almost identical to the claimed range between 0.5 and 1.8 mm (Paragraph 21). As to the makeup of the packing sheet, Ishikawa teaches that the packing sheet 5 is essentially part of the innerliner and can be formed of a gas impermeable compound (Paragraphs 16-20). While the reference fails to expressly disclose the hardness of such innerliner rubbers, the claimed range between 50 and 70 is consistent with the values commonly associated with such tire components, as shown for example by Ochiai (Column 3 , Lines 55-65) and Harrington (Column 2, Lines 35-40). As detailed above, applicant's data is not seen to constitute a conclusive showing of unexpected results. Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to form the rubber cover layer (packing sheet) with a hardness between 50 and 70 JIS A.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa as applied in claim 1 above and further in view of Klemmensen (US 5,005,625). As detailed above, Ishikawa discloses a tire construction including a rubber cover strip/packing sheet formed of an innerliner composition (high gas impermeability). While the reference fails to expressly disclose the glass transition temperature of such a rubber, Klemmensen teaches that innerliner compositions should include up to 80 phr of a rubber component having a glass transition temperature between –40 and –105 degrees Celsius (Column 1, Lines 45-65) in order to achieve a balance between processing properties and air impermeability. One of ordinary skill in the art at the time of the invention would have found it obvious to form the packing sheet of Ishikawa with the innerliner composition of Klemmensen for the reasons detailed above. It is further noted that Ishikawa broadly suggests the use of butyl rubbers, halobutyl rubbers, and styrene-butadiene copolymers, each of which is disclosed by Klemmensen (as pertain to the rubber having a low glass transition temperature). Also, in such an instance where an additional rubber is included in an amount of 20 phr, the overall glass transition temperature would be expected to be less than –50 degrees Celsius (due to extremely small loading).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin R Fischer
Primary Examiner
Art Unit 1791

JRF
October 30, 2007